

We are Reverse Engineering a broken V5 Remote
Controller

Names: Caroline Stevens, Mitzzy Flores Suarez, Arely
Hernandez-Ignacio, Wren Posner, Avery Woods

Team number: 8686M

Location: Sevier Middle School, Greenville County, South
Carolina

Introduction:

We decided to do a Vex Vrc controller because we thought it would be best for this project. We were interested in deconstructing a controller because we use a controller like this one. We feel that the controller is a great way to understand the components inside the electronics.



Summary of Components Found Inside:



I began by taking off the 8 screws that connect the top and bottom of the controller.

As I took the top off I saw wires and many buttons and more screws and many numbers. I then took out a screw to get to the middle to see what was going on there. I took out 2 screws and I still don't have a better look.

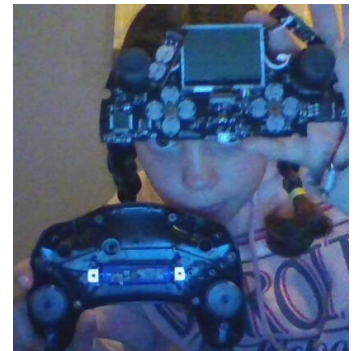


I have taken out 2 more screws in the process of getting to the middle. You could see the motherboard now. While I was taking the screws out I saw that as I moved the 2 joysticks in the middle I saw some of the mechanics working.



As I was taking out the screws this big piece fell off and I could now see how the trigger buttons are held on and the buttons for the triggers.

The buttons are now off and with them off it is completely exposing the wires and buttons for the triggers. The main electronics part is still connected but fell out and the battery is now exposed. The component is completely disconnected and the battery is fully exposed.



The battery is disconnected so the electronics in the remote are now useless and you can see the generator now. The piece that was holding on to the controller screen and wires for the buttons is off and you can now move all the wires to their fullest extent.

Motherboard:



I will be researching the motherboard of the remote to see what part it does and plays in the system. A circuit board is something that connects all of your hardware to your processor and distributes power through the controller. The motherboard's main purpose is to tie the components together at one spot and allow them to talk to each other. It also holds together many components of an electrical object.

Lessons Learned

I have come to the conclusion that the remote controller has a very important part in robotics. All the components have an important part for the controller. For instance the motherboard holds all the components together and to help them talk to each other to control. Another thing I have learned is that the remote controller is a very coded and hard system to learn. I have released while I have been taking apart this remote controller. Someone put their hard work into building this and coding this is a crucial part for the brain of robotics and how all of it is connected. One thing I found surprising is that when I took off the motherboard I found a battery and I had thought the remote was something that was charged. I did not realize that it needed a rechargeable battery. I found it very surprising.